

AMENDMENT TO THE CLAIMS:

1. (currently amended) A process for measuring and monitoring motor systems, said process comprising:

providing a motor system having at least one component selected from a stator and an armature, said at least one component connected to at least one electrical wire;

incorporating at least one fiber optical cable with said at least one electrical wire, the fiber optical cable is provided with at least one physical parameter sensor and is embedded in an electrical insulation coating surrounding at least one electrical wire;

~~measuring a physical parameter using the physical parameter sensor;~~

~~collecting data~~the measured physical parameter as collected data with said at least one fiber optical cable; and

~~transferring said collected data to a data collection station; and~~

~~monitoring the collected data.~~

2. (canceled)

3. (currently amended) A process according to claim 2 ~~1~~ wherein said fiber optical cable is encapsulated and attached to said electrical wire by covering or coating the electrical wire and the ~~fiber optical cable means for measuring data~~ with an insulation material.

4. (canceled)

5. (previously amended) A process for measuring and monitoring motor systems, said process comprising:

providing a motor system having at least one motor component selected from a stator and an armature, said at least one component connected to at least one electrical wire;

providing at least one means for data measurement wherein said means for data measurement comprises a fiber optical cable;

connecting said at least one means for data measurement with said at least one motor component;

collecting data with said at least one means for data measurement; and

transferring said collected data to a data collection station.

6. (original) A process according to claim 5 wherein said means for measuring data is contained within a tube.

7. (original) A process according to claim 6 wherein said motor component is a stator and said tube is wound in said stator with said electrical wire.

8 (canceled)

9. (canceled)

10. (currently amended) An apparatus for measuring and monitoring motor systems comprising:

a motor system having at least one motor component selected from a stator and an armature, said at least one component connected to at least one electrical wire:

~~an optic a fiber optical cable~~ wound around said electrical wire;

means for ~~measuring and collecting~~ data with said ~~optic fiber optical cable~~; and

means for communicating said data to at least one sensor located outside said motor wherein the sensor can use the data to monitor the motor system.

11. (canceled)

12. (currently amended) The apparatus according to claim ~~11~~ 10 wherein ~~the fiber optical cable said means for measuring data~~ is encapsulated and attached to said electrical wire by covering or coating the electrical wire and the ~~fiber optical cable means for measuring data~~ with an insulation material.